

CLAIMS

1 – 6 (canceled)

7. (previously presented) A computer-based method for monitoring and carrying out a diagnosis of a technical installation comprising a plant for generating electrical power, the method comprising:

monitoring a plurality of distinct types of machinery in the technical installation, said distinct types of machinery including rotating and non-rotating machinery, said monitoring configured to acquire a number of temperature values and temperature information regarding the plurality of distinct types of machinery, wherein the monitoring is configured to account for interactions that occur between at least some of the distinct types of machinery in the technical installation;

deriving a temperature pattern from the number of temperature values and temperature information related to the plurality of distinct types of machinery of the technical installation and related to a present operating situation of the technical installation;

comparing the derived temperature pattern to a known failure temperature pattern and a stored failure temperature pattern and a process a disturbance temperature pattern related to a specific operating situation of the technical installation; and

based on results from the comparing, determining whether the present operating situation of the plant for generating electrical power comprises one of the following operating situations: a normal operating situation, a stationary operating situation, a transient operating situation, a tolerable operating situation, an abnormal operating situation, and a dangerous operating situation.

8. (previously presented) The method according to claim 7, further comprising storing the determined present operating situation and its related temperature pattern for a future comparison with a future temperature pattern occurring during a future operation of the technical installation.

9. (previously presented) The method according to claim 8, further comprising acquiring the temperature values and temperature information by means of an infrared camera.

10. (previously presented) An apparatus for carrying out diagnosis of a technical installation comprising a plant for generating electrical power, the apparatus comprising a computer-readable medium having stored therein:

a data acquisition module adapted to acquire a number of temperature values and temperature information related to a plurality of distinct types of machinery of the technical installation, said distinct types of machinery including rotating and non-rotating machinery, wherein acquisition of data performed with the data acquisition module is configured to account for interactions that occur between at least some of the distinct types of machinery in the technical installation; and

an analysis module adapted to derive a temperature pattern related to a present operating situation of the technical installation from the temperature values and temperature information, wherein the analysis module comprises computer-readable code adapted to compare the temperature pattern to a known failure temperature pattern and a stored failure temperature pattern and process a disturbance temperature pattern related to a specific operating situation of the technical installation,

and wherein the analysis module further comprises computer-readable code adapted to determine whether the present operating situation of the plant for generating electrical power comprises one of the following operating situations: a normal operating situation, a stationary operating situation, a transient operating situation, a tolerable operating situation, an abnormal operating situation, and a dangerous operating situation.

11. (previously presented) The apparatus according to claim 10, further comprising a memory adapted to store the determined present operating situation and its related temperature pattern for a future comparison with a future temperature pattern occurring during a future operation of the technical installation.

12. (previously presented) The apparatus according to claim 10, further comprising an infrared camera included by the data acquisition module.

13. (previously presented) The apparatus according to claim 11, wherein the memory is a database.